

1764
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:
Wellington, et al.

Serial No.: 09/841,636

Filed: April 24, 2001

For: IN SITU THERMAL PROCESSING
OF A HYDROCARBON CONTAINING
FORMATION TO PRODUCE A
MIXTURE INCLUDING AMMONIA



Examiner: Unknown

Group Art Unit: 1764

Atty. Dkt: 5659-03700

Certificate of Mailing 37 C.F.R. § 1.8(a)

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Jackie Pitre

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
Washington, D.C. 20231

Sir:

It is respectfully requested that this Information Disclosure Statement be entered and the documents listed on attached Form PTO-1449 (references A257-A348) be considered by the Examiner and made of record. Copies of the listed documents are enclosed for the convenience of the Examiner.

Should any fees be required, the Commissioner is authorized to charge said fees to Conley, Rose & Tayon, P.C. Deposit Account No. 50-1505/5659-03700/EBM.

Respectfully submitted,

Eric B. Meyertons

Reg. No. 34,876

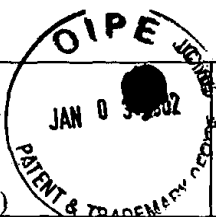
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List of Patents and Publications
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OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

A257	Comparison of Methods for Measuring Kerogen Pyrolysis Rates and Fitting Kinetic Parameters, Burnham et al., Marc 23, 1987, (29 pages).
A258	Further Comparison of Methods for Measuring Kerogen Pyrolysis Rates and Fitting Kinetic Parameters, Burnham et al., September 1987, (16 pages).
A259	Tests of a Mechanism for H ₂ S Release During Coal Pyrolysis, Coburn et al., May 31, 1991, (6 pages).
A260	Kinetic Studies of Gas Evolution During Pyrolysis of Subbituminous Coal, J. H. Campbell et al., May 11, 1976, (14 pages).
A261	Excavation of the Partial Seam Crip Underground Coal Gasification Test Site, Robert J. Cena, August 14, 1987, (11 pages).
A262	Evolution of Sulfur Gases During Coal Pyrolysis, Oh et al., February 3, 1988, (11 pages).
A263	Coal Pyrolysis and Methane Decomposition In the Presence of a Hot Char Bed, Peters et al., August 1983, (21 pages).
A264	Pyrolysis Kinetics and Maturation of Coals from the San Juan Basin, John G. Reynolds & Alan K. Burnham, December 1992, (30 pages).
A265	Numerical Model of Coal Gasification in a Packed Bed, A.M. Winslow, April 1976 (27 pages).
A266	LLL In-Situ Coal Gasification Program, Stephens et al., June, 14, 1976 (12 pages)
A267	Pyrolysis of Subbituminous Coal as it Relates to In-Situ Coal Gasification, J.H. Campbell, January 17, 1977 (20 page
A268	The Historical Development of Underground Coal Gasification, D. Olness & D.W. Gregg, June 30, 1977 (60 pages).
A269	Laboratory Measurements of Groundwater Leaching and Transport of Pollutants Produced During Underground Coal Gasification, V.A. Dalton & J.H. Campbell, March 1, 1978 (21 pages).
A270	The Hoe Creek II Field Experiment of Underground Coal Gasification, Preliminary Results, Aiman et al., February 27 1978 (26 pages).
A271	Ground-Water and Subsidence Investigations of the LLL In Situ Coal Gasification Experiments, Mead et al, July 17-2 1978 (31 pages).
A272	Geotechnical Instrumentation Applied to In Situ Coal Gasification Induced Subsidence, Ganow et al. June 21, 1978 (1 pages).
A273	The Use of Tracers in Laboratory and Field Tests of Underground Coal Gasification and Oil Shale Retorting, Lyczkowski et al., June 16, 1978 (19 pages).
A274	Underground Gasification of Rocky Mountain Coal, D.R. Stephens and R.W. Hill, July 18, 1978 (15 pages).
A275	High-BTU Gas Via In Situ Coal Gasification, Stephens et al., October, 1978 (41 pages).
A276	A One-Dimensional Model for In Situ Coal Gasification, Thorsness et al., August 25, 1978 (76 pages).
A277	Control Aspects of Underground Coal Gasification: LLL Investigations of Ground-Water and Subsidence Effects, Mead et al., November 10, 1978 (21 pages).
A278	Environmental Controls for Underground Coal Gasification: Ground-Water Effects and Control Technologies, Warre Mead & Ellen Raber, March 14, 1980 (19 pages).
A279	Results from the Third LLL Underground Coal Gasification Experiment at Hoe Creek, Hill et al., May 20, 1980 (12 pages).
A280	Results From the Hoe Creek No. 3 Underground Coal Gasification Experiment, Thorsness et al., May 1980, (11 page
A281	Steam Tracer Experiment at the Hoe Creek No. 3 Underground Coal Gasification Field Test, C.J. Thorsness, November 26, 1980 (51 pages).
A282	Computer Models to Support Investigations of Surface Subsidence and Associated Ground Motion Induced by Underground Coal Gasification, R.T. Langland & B.C. Trent, July 1981 (16 pages).

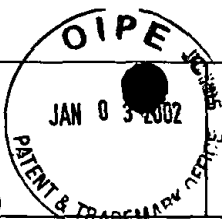
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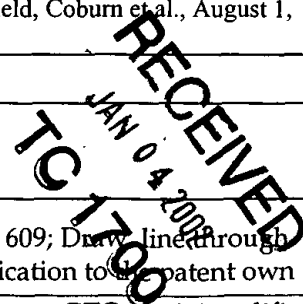
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

A283	Burn Cavity Growth During the Hoe Creek No. 3 Underground Coal Gasification Experiment, R.W. Hill, June 8, 198 (28 pages).
A284	The Controlled Retracting Injection Point (Crip) System: A Modified Stream Method for <u>In Site</u> Coal Gasification, R.W. Hill & M.J. Shannon, April 15, 1981 (11 pages).
A285	Coal Block Gasification Experiments: Laboratory Results and Field Plans: C.B. Thorsness & R.W. Hill, July 1981 (23 pages).
A286	Laboratory Scale Simulation of Underground Coal Gasification: Experiment and Theory, J.R. Creighton & (27 pages)
A287	Underground Coal Gasification – A Leading Contender in the Synfuels Industry, D.R. Stephens, October 27, 1981 (42 pages).
A288	Computer Models to Support Investigations of Surface Subsidence and Associated Ground Motion Induced by Underground Coal Gasification, B.C. Trent & R.T. Langland, August 1981 (40 pages).
A289	The Hoe Creek Experiments: LLNL's Underground Coal Gasification Project in Wyoming, D.R. Stephens, October 1981 (162 pages).
A290	Technical Underground Coal Gasification Summation: 1982 Status, Stephens et al., July 1982 (22 pages).
A291	Review of Underground Coal Gasification Field Experiments at Hoe Creek (34 pages).
A292	Underground Coal Gasification Using Oxygen and Steam, Stephens et al., January 19, 1984 (37 pages).
A293	Shale Oil Cracking Kinetics and Diagnostics, Bissell et al., November 1983, (27 pages).
A294	Mathematical Modeling of Modified In Situ and Aboveground Oil Shale Retorting, Robert L. Braun, January 1981 (4 pages).
A295	Progress Report on Computer Model for In Situ Oil Shale Retorting, R.L. Braun & R.C.Y. Chin, July 14, 1977 (34 pages).
A296	Analysis of Multiple Gas-Solid Reactions During the Gasification of Char in Oil Shale Blocks, Braun et al., April 198 (14 pages).
A297	Chemical Kinetics and Oil Shale Process Design, Alan K. Burnham, July 1993 (16 pages).
A298	Reaction Kinetics and Diagnostics For Oil Shale Retorting, Alan K. Burnham, October 19, 1981 (32 pages).
A299	Reaction Kinetics Between Steam and Oil Shale Char, A.K. Burnham, October 1978 (8 pages).
A300	General Kinetic Model of Oil Shale Pyrolysis, Alan K. Burnham & Robert L. Braun, December 1984 (25 pages).
A301	General Model of Oil Shale Pyrolysis, Alan K. Burnham & Robert L. Braun, November 1983 (22 pages).
A302	Pyrolysis Kinetics for Green River Oil Shale From the Saline Zone, Burnham et al., February, 1982 (33 pages).
A303	Reaction Kinetics Between CO ₂ and Oil Shale Char, A.K. Burnham, March 22, 1978 (9 pages front & back).
A304	Reaction Kinetics Between CO ₂ and Oil Shale Residual Carbon. I. Effect of Heating Rate on Reactivity, Alan K. Burnham, July 11, 1978 (11 pages front and back).
A305	High-Pressure Pyrolysis of Colorado Oil Shale, Alan K. Burnham & Mary F. Singleton, October 1982 (23 pages).
A306	A Possible Mechanism Of Alkene/Alkane Production in Oil Shale Retorting, A.K. Burnham, R.L. Ward, November 2 1980 (20 pages).
A307	Enthalpy Relations For Eastern Oil Shale, David W. Camp, November 1987 (13 pages).
A308	Oil Shale Retorting: Part 3 A Correlation of Shale Oil 1-Alkene/n-Alkane Ratios With Yield, Coburn et al., August 1, 1977 (18 pages).
A309	The Composition of Green River Shale Oil, Glen L. Cook, et al., 1968 (12 pages).

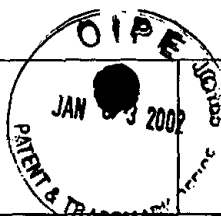
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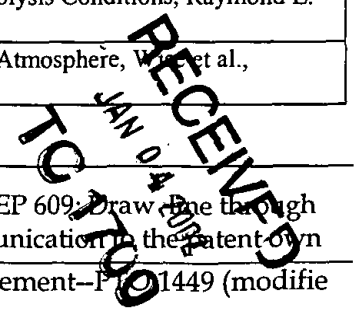
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

A310	On-line, Mass Spectrometric Determination of Ammonia From Oil Shale Pyrolysis Using Isobutane Chemical Ionization, Crawford et al., March 1988 (16 pages).
A311	Thermal Degradation of Green River Kerogen at 150° to 350° C Rate of Production Formation, J.J. Cummins & W.E. Robinson, 1972 (18 pages).
A312	Retorting of Green River Oil Shale Under High-Pressure Hydrogen Atmospheres, LaRue et al., June 1977 (38 pages).
A313	Retorting and Combustion Processes In Surface Oil-Shale Retorts, A.E. Lewis & R.L. Braun, May 2, 1980 (12 pages).
A314	Oil Shale Retorting Processes: A Technical Overview, Lewis et al., March 1984 (18 pages).
A315	Study of Gas Evolution During Oil Shale Pyrolysis by TQMS, Oh et al., February 1988 (10 pages).
A316	The Permittivity and Electrical Conductivity of Oil Shale, A.J. Piwinski & A. Duba, April 28, 1975 (12 pages).
A317	Oil Degradation During Oil Shale Retorting, J.H. Raley & R.L. Braun, May 24, 1976 (14 pages).
A318	Kinetic Analysis of California Oil Shale By Programmed Temperature Microphyrolysis, John G. Reynolds & Alan K. Burnham, December 9, 1991 (14 pages).
A319	Analysis of Oil Shale and Petroleum Source Rock Pyrolysis by Triple Quadrupole Mass Spectrometry: Comparisons o Gas Evolution at the Heating Rate of 10°C/Min., Reynolds et al. October 5, 1990 (57 pages).
A320	Catalytic Activity of Oxidized (Combusted) Oil Shale for Removal of Nitrogen Oxides with Ammonia as a Reductant in Combustion Gas Streams, Part II, Reynolds et al., January 4, 1993 (9 pages).
A321	Fluidized-Bed Pyrolysis of Oil Shale, J.H. Richardson & E.B. Huss, October 1981 (27 pages).
A322	Retorting Kinetics for Oil Shale From Fluidized-Bed Pyrolysis, Richardson et al., December 1981 (30 pages).
A323	Recent Experimental Developments in Retorting Oil Shale at the Lawrence Livermore Laboratory, Albert J. Rothman August 1978 (32 pages).
A324	The Lawrence Livermore Laboratory Oil Shale Retorts, Sandholtz et al. September 18, 1978 (30 pages).
A325	Operating Laboratory Oil Shale Retorts In An In-Situ Mode, W. A. Sandholtz et al., August 18, 1977 (16 pages).
A326	Some Relationships of Thermal Effects to Rubble-Bed Structure and Gas-Flow Patterns in Oil Shale Retorts, W. A. Sandholtz, March 1980 (19 pages).
A327	Assay Products from Green River Oil Shale, Singleton et al., February 18, 1986 (213 pages).
A328	Biomarkers in Oil Shale: Occurrence and Applications, Singleton et al., October 1982 (28 pages).
A329	Occurrence of Biomarkers in Green River Shale Oil, Singleton et al., March 1983 (29 pages).
A330	An Instrumentation Proposal for Retorts in the Demonstration Phase of Oil Shale Development, Clyde J. Sisemore, April 19, 1977, (34 pages).
A331	A Laboratory Apparatus for Controlled Time/Temperature Retorting of Oil Shale, Stout et al., November 1, 1976 (19 pages).
A332	SO ₂ Emissions from the Oxidation of Retorted Oil Shale, Taylor et al., November 1981 (9 pages).
A333	Nitric Oxide (NO) Reduction by Retorted Oil Shale, R.W. Taylor & C.J. Morris, October 1983 (16 pages).
A334	Coproduction of Oil and Electric Power from Colorado Oil Shale, P. Henrik Wallman, September 24, 1991 (20 pages).
A335	¹³ C NMR Studies of Shale Oil, Raymond L. Ward & Alan K. Burnham, August 1982 (22 pages).
A336	Identification by ¹³ C NMR of Carbon Types in Shale Oil and their Relationship to Pyrolysis Conditions, Raymond L. Ward & Alan K. Burnham, September 1983 (27 pages).
A337	A Laboratory Study of Green River Oil Shale Retorting Under Pressure In a Nitrogen Atmosphere, W. A. Sandholtz et al., September 1976 (24 pages).

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A338	Quantitative Analysis and Evolution of Sulfur-Containing Gases from Oil Shale Pyrolysis by Triple Quadrupole Mass Spectrometry, Wong et al., November 1983 (34 pages).
A339	Quantitative Analysis & Kinetics of Trace Sulfur Gas Species from Oil Shale Pyrolysis by Triple Quadrupole Mass Spectrometry (TQMS), Wong et al., July 5-7, 1983 (34 pages).
A340	Application of Self-Adaptive Detector System on a Triple Quadrupole MS/MS to High Explosives and Sulfur-Containing Pyrolysis Gases from Oil Shale, Carla M. Wong & Richard W. Crawford, October 1983 (17 pages).
A341	An Evaluation of Triple Quadrupole MS/MS for On-Line Gas Analyses of Trace Sulfur Compounds from Oil Shale Processing, Wong et al., January 1985 (30 pages).
A342	Source and Kinetics of Sulfur Species in Oil Shale Pyrolysis Gas by Triple Quadrupole Mass Spectrometry, Wong et al., October 1983 (14 pages).
A343	The Centralia Partial Seam CRIP Underground Coal Gasification Experiment, Cena et al., June 1984 (38 pages).
A344	Results of the Centralia Underground Coal Gasification Field Test, Hill et al., August 1984 (18 pages).
A345	Excavation of the Partial Seam Crip Underground Coal Gasification Test Site, Cena et al., August 14, 1987 (11 pages).
A346	Assessment of the CRIP Process for Underground Coal Gasification: The Rocky Mountain I Test, Cena et al., August 1988 (22 pages).
A347	Mild Coal Gasification-Product Separation, Pilot-Unit Support, Twin Screw Heat Transfer, and H ₂ S Evolution, Camp et al., August 9, 1991 (12 pages).
A348	Underground Coal Gasification Site Selection and Characterization in Washington State and Gasification Test Design Randolph Stone & R.W. Hill, September 10, 1980 (62 pages).

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